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Project Narrative

Southwestern Community College

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Demonstration of Needs: Emerging Economic Imperatives.

The new economic order is creating a wealth of opportunity for those who have access to information technology--and a widening gap for those who do not. Just as rivers, railroads and highways were the lifeblood of town and cities in the past, so telecommunications is the valued medium of today's economy. The capacity of one's telecommunications infrastructure is the **key to education and economic development** in the new knowledge-based economy. For regions that have the ability to anticipate and adapt to this shift, the new economy (which is being driven by the digital revolution) offers increased economic opportunities, higher living standards, more individual choices, stronger communities, and wider and more meaningful participation in government and public life. Those who cannot--or will not--will be left behind. This *Digital Divide* revolves around *connectivity,* which means not only access to the basics of telephone, but to computers and the Internet. And it is not just a matter of wiring, but of accessibility and affordability, especially for broadband (advanced, high-capacity) communications. The cost difference issue puts North Carolina's rural areas at a tremendous economic disadvantage. Significant economic decline and abandonment are creating a viscous cycle of out-migration of young workers, inadequately funded schools, loss of medial facilities and other amenities, and the continual downward spiral of quality of life for those remaining.

The issue for service providers is *aggregate demand*. It is simply more profitable to target high-end customers in the most densely populated areas, where demand is the greatest and the infrastructure requirements are most concentrated. In urban areas, the presence of major research universities, world-class medical centers, and high-tech industries (bringing with them a solid technical infrastructure) have attracted tremendous economic activity and growth. Rural areas simply cannot compete for connectivity unless they find ways to leverage their buying power and create the demand. By all these measures, the Nation's rural communities lag behind and are likely to fall further behind unless something changes

> In the middle of difficulty
> lies opportunity.
> Albert Einstein

In the future, economic development in our region of western North Carolina will depend less upon landing a singular blue-chip industry and more upon how well we have prepared our region for a knowledge-based economy. The region's **public school students** need exposure to cultural, social, and educational experiences to prepare them to live in a global village. Area **high school students** need to prepare for advanced studies and fruitful careers. They urgently need the enhanced access to educational opportunities that distance education will provide. Without this access, they will lack reasonable opportunities to prepare for college entrance, academic success in college, and advancement in their careers. The **region's workers** need to qualify for advancement, keep pace with changes in technology and their professional responsibilities, and enable the region's public and private agencies to maintain economic viability and competitiveness. The alternatives include obsolescent skills and unemployment. Many of the **region's adults** are functionally illiterate, and are isolated from work opportunities that might earn a "living wage" and from becoming full participants as a citizen of their communities. Without the distance education services, they face greatly delayed access to urgently needed instruction and extended periods of under- or unemployment and dependence on public programs. Finally, area businesses, artisans, public agencies and local governments need access to the tools of the 21st Century to be competitive and provide the services their constituents want and need.

Southwestern Community College (SCC) serves one of the most **geographically isolated, and economically deprived areas in southern Appalachia**. The three county service area (Jackson, Macon, and Swain, which includes the Cherokee Indian Reservation) is surrounded on all sides by the 5,000 foot peaks of the Blue Ridge and Smoky Mountains (see Appendix A). The terrain ranges from some of the highest mountains east of the Mississippi to deep, shaded gorges where trout-filled streams turn into rushing whitewater rivers. Along country roads and around town squares, there is impressive architecture, but even the best efforts of man are dwarfed by the majesty of the surrounding mountains.

The native mountain people and Cherokee tribal members have developed a marvelously rich, although encapsulated, culture. Their geographic isolation, as well as their commendable mountain pride and independence, however, have created **barriers to economic solvency**. Historically, area residents have not seen much need to further their education or to earn a college degree. But times have changed. Now, most jobs require, at a minimum, a technical, computer or associates degree. Recent tours of prospective businesses looking to relocate or expand operations in our service area reaffirm the fact that employers are not only interested in numbers of available workers, but also in the education level of that laborforce. **Mainstream cultural opportunities are not readily available** in the isolated mountain communities. While such opportunities cam be found in urban areas such as Asheville, Atlanta and Charlotte, travel time and expense prevent the local residents from seeking it out. Poor education and low socioeconomic status are unfortunate partners that yield values which do not foster an appreciation of mainstream cultural opportunities. The media frequently portrays this provincialism as charming; however, there is a cost for ignorance of the world's art, music, culture, history, diversity, and philosophy.

Because of the geography of our region, many of our rural communities are excluded from the highspeed telecommunications needed to compete in the new economy. At the same time, these communities are attracting new skilled workers and businesses fleeing the gridlock of highly populated urban areas. As our region grows, there is a fear that much of western North Carolina is at risk of being on the "wrong side of the digital divide."

Project Purpose: An Opportunity to Narrow the Digital Divide

The Challenge. The development and maintenance of a technologically sophisticated, competitively priced telecommunications infrastructure has become strategically important to nurturing our economic, cultural and educational development. A combination of high costs and limited choices has put our region at a disadvantageous position with respect to adjacent regions.

Our high costs and poor access to modern telecommunications services and systems reflects our relative isolation from the political and economic power associated with large, metropolitan communities. Even our larger employers are paying an unreasonably high cost for absolutely essential telecommunications access which limits their ability to stay in the region. In addition, this lack of access to affordable telecommunications services hinders the ability of the region as a whole to recruit new businesses to the area.

Telecommunications has the ability to deliver information and to link geographically remote individuals. There is a growing consensus among elected officials, educators, business people, health care providers and artists that we should strive to meet and exceed the telecommunications services associated with our major metropolitan cities in order to be part of the world market place and to connect users to a worldwide library of information and to a worldwide population of other users.

An advanced telecommunications infrastructure - one that does not penalize our citizens for living in relative isolation from major metropolitan centers - can become a principal foundation for renewing our cultural and economic vitality without sacrificing our quality of life. A high quality telecommunications system can become a two way window through which our educators, students, business people, artists, health care providers and citizens can communicate, instantaneously, with people across the globe. An accessible, reasonably priced telecommunications system can help our communities fashion new, complimentary strategies for solving transportation, energy, and land use dilemmas. Through telecommunications, economic development can occur without sacrificing the quality of life treasured in the region. A durable, diversified telecommunications system will further enable us to shape a sustainable economic future - a future in which small businesses, libraries, museums, schools and individuals have access to low cost, reliable telecommunications.

Our immediate challenge is to ensure that the Smoky Mountains create and maintain a telecommunications system which rivals that found in our major metropolitan cities. Our ultimate challenge, if successful, will be to do so without fostering change which forsakes the natural beauty and rural character we call The Smokies.

The Solution. Close your eyes and envision, if you will, an integrated connectivity plan which enables a shared Network to be created in a rural area previously isolated by its friendly but formidable mountains and poor transportation infrastructure. Using 10mb, ATM and H.323 technologies to deliver an integrated *menu* of voice, data and video services (NCIH, Internet, videostreaming, CD resources, interactive television) imagine that Southwestern Community College serves this mountain area as a Regional Applications Service Provider (ASP). Area partners *browse* the connectivity and applications menu--making independent decisions about the degree to which they will *plug-in* to the *open architecture* of the Network and draw down services. Network partners share technical support which none could justify nor afford on their own and they export courseware and other application deliverables world-wide (see Appendices C and D).

"A dream?" you say--as you open your eyes. No, this is a *work in progress.* Much like a good 'ol fashioned barn raising once took an entire community to pull off, we believe that by leveraging our collective buying power and creating a *critical mass* through this Network, called the **Smoky Mountain Knowledge Network**, we are empowered to be a driver in the social and economic destiny of our region--not remain a mere defenseless ship tossed about in the torrent digital sea.

It is clear that technology is transforming our lives and our economy. The *Digital Revolution*--powered by advanced telecommunications--is producing rapid, constant and profound change and is becoming primary driver for social change, economic growth and quality of life. All individuals and organizations seeking to participate in this new economy must be connected. But to do well, connectivity is not the only issue--people, companies and communities need support and value-added

services and application opportunities to leverage the connectivity such as Internet Service Providers (ISPs), e-commerce, and Web development. That is where the Smoky Mountain Knowledge Network comes in--it intertwines the issues of connectivity (access to bandwidth) with issues of applications (what to do with the connectivity once you get it).

Based on this knowledge, over a year-long planning period, using our collective experience as well as external consultant expertise, regional consensus has been reached on a conceptual design that:
Has the following goals:

- Found a sustainable and self-sufficient private connectivity enterprise which warrants a point of presence (POP) able to support multiple public and private providers;
- Establish easy access for area partners to tap into the bandwidth connectivity at competitive prices;
- Assure partners maximum control of their own networks while providing flexible pathways for them to engage in the wealth of shared resources; and
- Create and import a multiplicity of applications and value-added services to be made available via the connectivity.

Will addresses the following specific objectives and activities:

- With regional public school districts, provide opportunities for distance learning of critical college preparatory courses, as well as mainstream cultural, social, and augmentative learning enrichment activities for unserved and underserved ***K - 12 grade students*** in isolated rural areas within the SCC service area.
- With Western Carolina University, provide opportunities for distance learning of core college curricula and discipline-specific experiences for unserved and underserved ***college students***.
- With Western Carolina University's College of Education, the North Carolina Center for the Advancement of Teaching (NCCAT), and the RECA (SP), provide distance learning opportunities for professional development for new and distinct audiences, including ***preservice teachers and inservice teachers*** region and state-wide.
- With Western Carolina University's Two-Year Community College Leadership Program, provide distance learning opportunities for new and distinct audiences of ***community college leaders*** in the region, state and nation.
- With the Bureau of Indian Affairs, U.S. Forrest Service, and U.S. National Park Service, provide distance learning opportunities for new and distinct audiences in the Eastern United States, including ***newly commissioned and inservice law enforcement officers*** serving Indian Reservation, U.S. Forrest, and U.S. Park Service lands.
- With the SCC Small Business Center, regional Economic Development Commission (Advantage West), and other business and industry partners, provide distance learning opportunities for new and distinct audiences in the ***private sector***, including existing small/mid-sized businesses and emerging/incubated businesses and artisans.

When a man does not know what harbor he is making for,
no wind is the right wind.
Seneca

· With area public agencies and governments as well as the regional library service provider, provide distance learning opportunities for new and distinct audiences in the private sector, including ***literacy and basic skills development***, ***technology awareness***, ***general professional development***, as well as ***specialized licensure, medical and health certifications, Outdoor Leadership, and Electronic Commerce*** courses.

* Intended beneficiaries and proposed services detail may be found in Appendix F.

Long-Term Outcomes include:

- Engage a broad-based Infrastructure Coalition in modernizing a regional interactive information network;
- Pool, share and maximize resources--instructional programs, library resources, expertise;
- Catalyze the development of area young people--impact the drop out and college going rate;
- Move into full participation of a isolated rural area in the knowledge-based economy;
- Engage in workforce preparedness through literacy efforts and increased access to training and professional education;
- Stimulate new and expanded knowledge-based business within the region;
- Develop the capacity within the region to develop intellectual properties that can build wealth;
- Encourage entrepreneurial home-based businesses based on e-commerce;
- Provide residents with more (and more diverse) education and training closer to their homes and work sites;
- Increase citizen and visitor access to on-line educational and cultural resources by connecting to resources typically available only in urban areas;
- Import educational and training programs not available from local providers and distribute these programs across the region; and
- Improve operational efficiencies and reduce complexity of systems among and between existing public and non-profit agencies and local governmental units.

Innovation

Today many are answering the collective "call to action" and are mobilizing to offer ideas and solutions to this international quandary of the digital "haves and have-nots." We believe, however, that the work of Southwestern Community College and its regional partners has resulted in a dynamic and unique conceptual model which could very well serve as a paragon--enabling the Nation's rural communities to take their place in the digital economy. The SMKN model's uniqueness centers around its strong and imaginative partnership--the all-inclusiveness of which makes it both truly "community-based" and comprehensive. We knew that we had "something special" in our local partnership, but that point was really driven home as we began to look around the country for a model--someone who had blazed a trail for us to follow. None could be found--not like ours--especially not one being spearheaded by a community college. Most community colleges have as part of their mission "service to the community" and economic development. A networking and telecommunications

> *Discovery consists of seeing what everybody has seen and thinking what nobody has thought.*
>
> Albert Szent-Gyorgi

initiative, such as our SMKN, is a perfect manifestation of this mission actually working in the community.

One of the things that SMKN partners find attractive is that the Network is a truly "shared" Network. No one "owns" the Network, per se. All of the partners collectively contribute their own strengths and resources and as a group buy-down connectivity and applications that none could afford or justify on their own (cost-effectiveness).

In addition, we have found that most networks that are being configured focus on either connectivity or applications--not both simultaneously. And when there is overlap, it is within a limited applications area. Our model is one that addressed both connectivity and applications for a wide range of organizational needs and applications.

Finally, we think that the autonomy extended to Network partners is very important and extremely unique. You see, no organization wants to be "enslaved" to another for all of their networking and applications needs--with no choices. "You're either in or you're out" is how many networks are configured. This model honors the autonomy of each partnering organization by giving each the opportunity to choose the degree to which they want to "plug into" or draw down connectivity and services from the Network. It does not preclude any partner from operating a very sophisticated local area network (LAN) or wide area network (WAN) for their own organization. Nor does it preclude each from seeking services from other internet service providers (ISP) or applications service providers (ASP). Quality, cost-effectiveness, ownership and direct impact on applications available, however, make the shared Network (SMKN) the network of "first choice."

Diffusion Potential

As mentioned earlier in this proposal, rural communities share many common problems (isolation, remoteness, economic decline, poverty, illiteracy, despair). A new problem they now share in this Information Age is difficulty accessing the connectivity and applications commonplace in most urban and sub-urban areas. The area proposed to be served by this project is about as rural as it gets. That very reality is perhaps the central driving reason that this SMKN initiative came into being. The SMKN project is a direct response to the lack of access to 21st Century digital resources needed to compete in the new economy--a plight suffered by most rural areas in America. We believe that this is why our SMKN project would hold significant interest for our sister rural communities across the country. In addition, the SMKN initiative, as described in the previous section, combines the qualities of uniqueness and practicality that promotes its adaptation and scalability by other rural communities.

Accessibility to our project design as well as implementation history and lessons learned are at the center of our dissemination plan which includes an aggressive attempt to share our work with others. This plan includes such activities as: the development of a web site which describes the SMKN initiative and chronicles its implementation; attending conferences and symposia to present SMKN to various audiences; the publication of annual reports to be disseminated to a wide range of stakeholders and interested parties; and the authoring of articles to be published in numerous journals and professional publications.

Project Feasibility

Technical Approach and System Capability**.** The proposed Smoky Mountain Knowledge Network will accommodate a totally integrated system for all application services--voice, data and video. All partners will be connected through the GTE cloud using Asynchronous Transfer Mode (ATM) over T-1 data lines. ATM provides the most flexible approach for accommodating a totally integrated system of video, voice, data, and telephony. The high bandwidth demands of compressed video or video over IP will be provided through T-1 data lines connected to the ATM cloud. If a larger bandwidth capacity is needed in the future, ATM has the flexibility to provide whatever bandwidth capacity the needs might demand. H.323 is the selected protocol for the network due to its ability to host a number of different network services. H.323 protocol is a networking industry established protocol for real-time communications over packet-based networks. The protocol can facilitate voice, video and data communications through local area networks using IP data packets which can be easily transported across a variety of other networks including ATM, Ethernet, Frame Relay and leased lines (see Appendix E).

- Interoperability and Coordination with Other Distance Learning Systems. Throughout the planning of the SMKN initiative, SCC and its partners ensured a focus on regional network capabilities that would be interoperable with, and complementary to, capabilities included in current and planned distance education programs and community-based networking trends in general. The planning of this project included extensive coordination with educational, governmental, for profit, and not-for-profit private sector entities. In addition, the Network's totally integrated format allows for the inherent interoperability of voice, data and video services. Finally, the flexibility of the chosen connectivity (H.323) enables Network partners to use "gateway" services to interconnect with external networks and services within and without the region, state and nation. To ensure future interoperability, SCC will adhere to generally accepted standards for networking configuration.
- Technical Alternatives Considered. After carefully researching and weighing the benefits and weaknesses of various types of connectivity, primarily microwave and cable TV, we settled on the connectivity provided for within the plan described in this proposal. Several things influenced our decisions in this area:
  - With regard to microwave technology--we determined that the terrain of the mountains would negatively impact the reliability of signals and that unpredictable and harsh weather could make relay links (towers) inaccessible.
  - With regard to cable TV technology--we learned that cable TV is so sparsely distributed in our region that may area partners did not have access to this type of connectivity. In addition, local cable companies were not in a position to accommodate our bandwidth and applications needs.
  - There was an established precedence for using telephone connectivity as a basis for our Network--as many area partners already had in place some basic infrastructure. In addition, there was a willingness on the part of the local telco to be a significant partner in the SMKN initiative.
- Scalability. A paramount concern of area partners was that of future growth--we did not want to box ourselves in or back into a corner we couldn't escape. Area partners were keenly aware of the expense that would be incurred in the initial configuration and implementation of the

Network and wanted to make sure that we did not find ourselves "right back where we started from" in just a few short years. The SMKN solution takes all of this into account--the use of the ATM cloud allows for virtually endless additions of new "players" and the H.323 technology allows for the integration and expansion of applications available via the connectivity. New partners only need to "tool up" (head-end equipment and telephone line to the ATM cloud) to plug into the Network.

- Maintenance of the Network. The SMKN initiative will be maintained in accordance with the sustainability plan described below. Organizational charts/job descriptions may be found in Appendix G.

Applicant Qualifications. A pioneer in every sense of the word, Southwestern Community College (see Appendix B) has long invested its resources and time in developing the information technology infrastructure it was sure would provide the "cutting edge" for its students and the foundation for the region to move forward with a highly aggressive economic development plan. With over 1000 office/laboratory-based networked computers, 17 computer labs (5 at off-campus sites), 2 portable networked lap-top computer labs, 3 campus/center-based Cisco Training Academies, mature training programs in Network Administration and Electronic and Computer Engineering Technology, and a emerging e-commerce initiative, Southwestern has achieved a *critical mass* of resources, faculty, facilities and equipment. Add to that a highly sophisticated technical support staff, a student-to-computer ratio of 3-to-1 and *free home internet access* to all full-time students, faculty and staff in three counties, and you have the underpinnings of Southwestern's vision for the future: to help grow the capacity of its people to engage in the benefits, rights and privileges of the Digital Economy.

SCC has provided limited distance learning opportunities to a select population within its service area through a "closed-loop" analog-based system for nearly a decade (12 sites including: four SCC sites, Western Carolina University, and seven local public schools--4 high Schools and 3 K - 12 schools). And with this decade of use, SCC and its partners have perfected a regional distance education process and planted the seeds to many more collaborative ventures.

Area partners also possess highly competent technical support staff, varying degrees of technology infrastructure, and a broad range of ability to draw down financial resources. Perhaps more importantly to the success of this project and the partnership that supports it, is their possession of a clear vision for the future with regard to how 21st Century technology can help them and those they serve, and a tenacity to gain access to the digital tools of the new Millennium.

Budget, Implementation Schedule, and Timeline. SCC and its area partners will fund over 50% of the total project implementation costs. We are proposing that the Telecommunications Opportunities Program (TOP) consider being one of the many investors we expect to take a financial interest in this monumental project (see budget forms and narrative). The partners have structured the implementation of this project in various stand-alone components so that each could be put in place simultaneously or in stages without jeopardizing the SMKN initiative as a whole. The TOP request centers around several key components: building connectivity infrastructure for several partner groups; engaging in an aggressive general population awareness campaign through community-based Tech Expos; the development of one of the application areas (the Virtual e-Commerce Resource Center); project

leadership and management; and project evaluation. The project will be implemented over a three-year period.

Sustainability. SCC and its area partners have nearly a decade of programmatic and budgetary commitment to educational distance learning services. This experience, coupled with sound commitment and a viable organizational design, add significant strength to the long term survivability of the SMKN initiative. Initial capital outlay expenses for connectivity and application menu items will be sought externally. Major advances in technology and emerging applications fields will be addressed collectively and on a case-by-case basis. However, regular ongoing costs associated with equipment upgrades, monthly line charges, software upgrades, and shared staff will be addressed through pro-rata cost sharing and the "pay-as-you-go" approach (based on services drawn down by various partners).

Community Involvement: Building Digital Scaffolding Through Partnerships.

Though Southwestern Community College enjoys a mature technological infrastructure, its area partners (public schools, libraries, health providers, public agencies and local governments) vary in their progression. Recognition of the inherent danger of this *digital patchwork landscape* (as well as an awareness that an advanced telecommunications infrastructure could become a principal foundation for renewing our cultural and economic vitality without sacrificing our quality of life) precipitated the College initiating a formalized mechanism for dialog and planning regarding the future of our region with regard to a sophisticated telecommunications network.

> The test of our progress is not whether we add
> more to the abundance
> of those who have much;
> it is whether we provide enough
> for those who have too little.
> Franklin Delano Roosevelt

The College has never operated on the premise "build it and they shall come," so working collaboratively on this new initiative was a given. Stakeholders and potential users are viewed as valuable participants in the planning process and have been included every step of the way. SCC conducted an extensive needs assessment process with the support of engineering consultants from GTE (Telco), engineering consultants from CISCO, its regional partners, as well as the participation of many other community agencies. The planners also studied distance education trends, aligned itself with the North Carolina Community College System, the N.C. University System, N.C. Public Instruction distance education plans, searched for models, examined networking strategies, and conferred with expert materials in the field.

Project Partners

The following represents a listing of the partners in the Smoky Mountain Knowledge Network initiative:

EDUCATIONAL INSTITUTIONS:	· Private Businesses
· Southwestern Community College Main Site	· Artisans
· Western Carolina University	**PUBLIC AGENCIES:**
· Jackson County Schools	· N.C. Center for the Advancement of Teaching
· Swain County Schools	· Bureau of Indian Affairs--Law Enforcement
· Cherokee Central Schools--Eastern Band of Cherokee Indian	· National Park Service
· Macon County Schools	· National Forest Service
PRIVATE AGENCIES:	· Area County Governments
· Area Hospitals	· Area Health Departments, Departments of Social Services and Recreation Departments
· GTE (Telco)	· Advantage West (Econ. Dev. Commission) and Region A Commission (COG)

There is a multiplicity of **roles** which each partner will play, including: • leaders in the continual development of the SMKN initiative; , facilitators of the implementation of various components of the SMKN project at their respective organizations; ƒ beneficiaries and end users of the connectivity and applications available through the Network; „ evaluators of both processes and outcomes with regard to SMKN; and … "cheerleaders" and/or spokespersons of SMKN within their own organizations, as well as within the region, state and nation. Major **benefits** to each of the partners is three-fold: • access to connectivity at an affordable rate; , access to a broad array of applications via the connectivity; and ƒ a "voice" in the educational and economic development of the region.

Specific contributions of each partner is reflective of the degree that they draw down services from the Network. However, in general, the following can be said about the contributions of the partners as a whole:

- Each partner will contribute a pro-rata share of the cost of several "common" or shared "pieces" of the Network including: bandwidth; the Director; and Network-specific technical staff (for support of the Network and end users);
- Using a "pay as you go" philosophy, each partner will contribute financial resources for the services that they draw down;
- Each partner will contribute the time and energy of tech-support and program development staff of their own respective organizations toward the operation and maintenance of the Network; and

· Each partner will contribute any existing infrastructure that may be used in building the Network.
·

The Network will be operationally and programmatically maintained formally through the work of the Smoky Mountain Technology Solutions Advisory Committee. This coalition will guide the implementation, trouble-shooting, and future development of SMKN. A broad-based group, including representation from all partnering organizations as well as other key stakeholders will convene on a regular (and ad hoc) basis to take care of regular business associated with the Network and to continue to nurture the partnership. Several words describe the qualities and activities that will be used to maintain the relationships that now form this strong and very dynamic and partnership: communication, honesty, openness, consensus, commitment, shared vision, and pragmatism. These are the very things that have supported a strong regional partnership which has given recent birth to several hugely successful initiatives: New Century Scholars, GEAR UP, Upward Bound, Tech Prep, School-to-Work, Huskins, Baccalaureate Bound, Dual Enrollment, WC_3, and many more.

Privacy, confidentiality and protection of Networks from fraud or improper use are all issues which have been brought to the forefront in recent months and have been of primary concern to SMKN partners. Several layers of "protection" will be in place to provide a high level of security for the Network as a whole as well as for individual partners and their customers--the primary one being the utilization of virtual local area networks (VLANS) that ensure the physical segmentation of the individual networks. Other precautions include: training for end users and LAN technicians; the use of passwords; firewalls; proxy services; and network address translation.

Reducing Disparities

"The U.S. economy is undergoing a fundamental transformation at the dawn of the new millennium," Robert D. Atkinson and Randolph H. Court write in their recent report, The New Economy Index, and they add that "the challenge now is to learn how to manage and govern in an era of sustained and constant innovation and adaptation. America plunges - and indeed leads the world - into the new economy (an economy driven largely by information technology). The dynamism of the new economy will not leave rural America untouched. Indeed the fundamental choice for rural communities is to connect to the emerging economy, or be left farther behind. And that is really no choice at all.

Information technology holds immeasurable promise for removing the distance barriers that have long stymied rural communities. Yet, rural people and communities enter the digital age at the decided disadvantage. For example, with regard to access to affordable connectivity: the cost of being connected to a T-1 line, a basic level of connectivity, is $216 in the urban city of Greensboro, NC compared to $2,316 in rural Murphy, NC a neighboring town in our area. This "divide" did not come about because of negligence. Simply, as with other utilities and services, rural areas are often the last to be served because of the higher price of doing business. This SMKN initiative has at its very core the accessibility and barrier issues…and its very design and configuration has intentionally been developed to address these issues head-on.

Evaluation and Documentation

We firmly believe that evaluation is a dynamic and important activity which will assist us in determining the effectiveness of our project. Accountability, increased knowledge of the impact of information technologies on rural, underserved communities, and effective project management are but a few results we seek from the evaluation of this project.

> Knowledge Comes,
> But wisdom lingers.
>
> Alfred Lord Tennyson

The evaluation of the project will have both a formative and a summative evaluation component. The project will incorporate the design and development of several evaluation measures, which include collecting, analyzing and reporting various data elements.

Because it is difficult to include all of the details relevant to this evaluation components in the narrative section of this proposal, specific details regarding the evaluation plan may be found in Appendix H.

Closing Remarks

In the three-counties proposed to be served by this project, we (SCC and its regional partners) have proven ourselves to be innovative and resourceful in solving the problems which face our communities. When given assistance from Federal agencies, the State of North Carolina, or private entities, we have always provided a significant return on investment. We look forward, with TOP support, to the opportunity to turn our vision into reality.